

Marine Life Protection Act Initiative



Habitat Evaluations of the Round 3 NCRSG MPA Proposal for the North Coast Study Region

Presentation to the MLPA Blue Ribbon Task Force
October 25, 2010 • Fortuna, CA

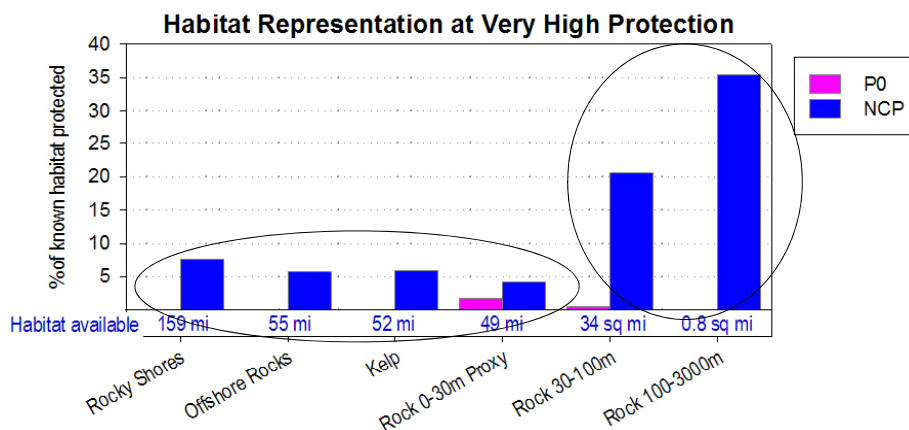
Dr. Mark Carr, Co-chair • MLPA Master Plan Science Advisory Team

Notes on Round 3 Evaluations

- **Results presented for very high protection MPAs:**
 - **No high protection MPAs** were included in the Round 3 NCRSG MPA proposal (NCP), thus evaluations at high protection are omitted from all evaluation materials
 - **Only one mod-high protection MPA** proposed, thus evaluations at mod-high protection are omitted from this presentation but included in other evaluation materials
- **Supplemental evaluation (labeled SUP) requested by MLPA Blue Ribbon Task Force includes:**
 - All MPAs or state marine recreational management areas (SMRMAs) at **moderate-high protection or above**
 - MPAs **below moderate-high protection** if the **only** proposed uses that reduced level of protection (LOP) below moderate-high were those intended to accommodate tribal uses



Representation: Rocky Habitats

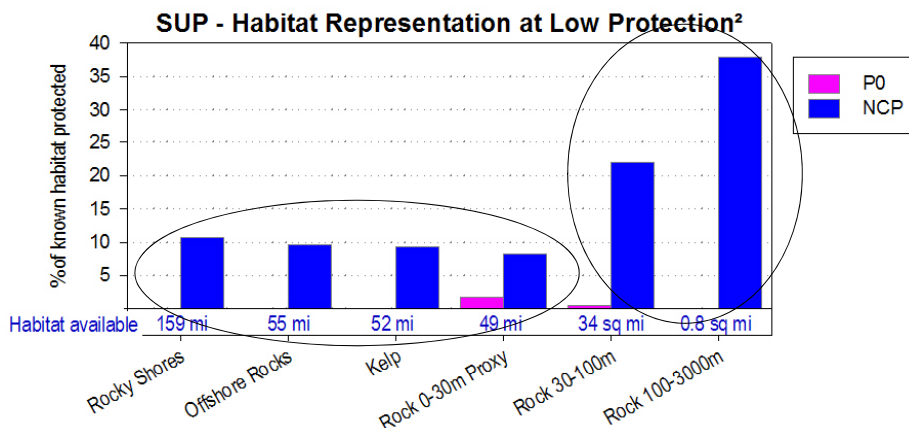


At very high protection:

- 4-8% of available shoreline and nearshore rocky habitats included
- 20-36% of deeper rock habitats included



Representation: Rocky Habitats

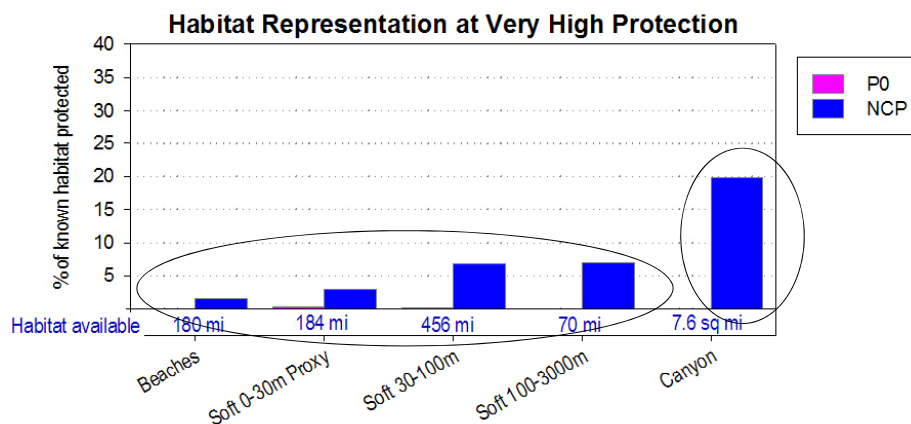


In the supplemental evaluation:

- 8-11% of available shoreline and nearshore rocky habitats included
- 22-38% of deeper rock habitats included

² Supplemental evaluations include MPAs at moderate-low and low LOP due to recreational take intended to accommodate only tribal uses, plus all MPAs at or above moderate-high protection.

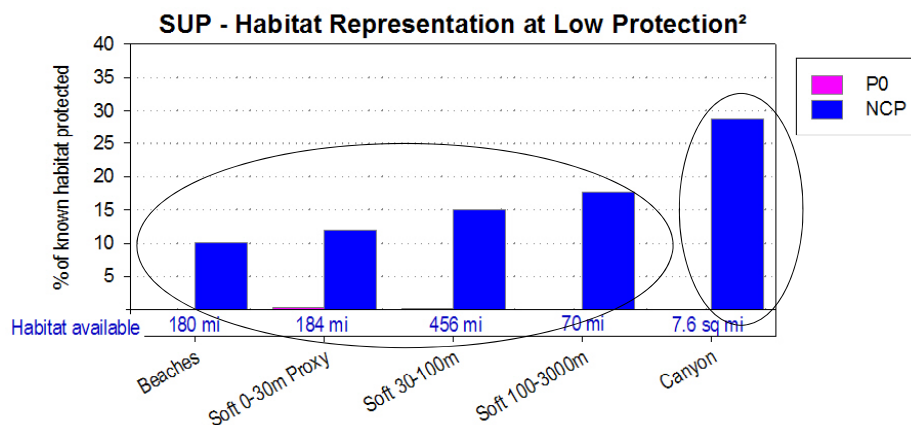
Representation: Soft Bottom Habitats



At very high protection:

- 1.5-7% of available soft-bottom habitats included
- ~20% of rare canyon habitat included

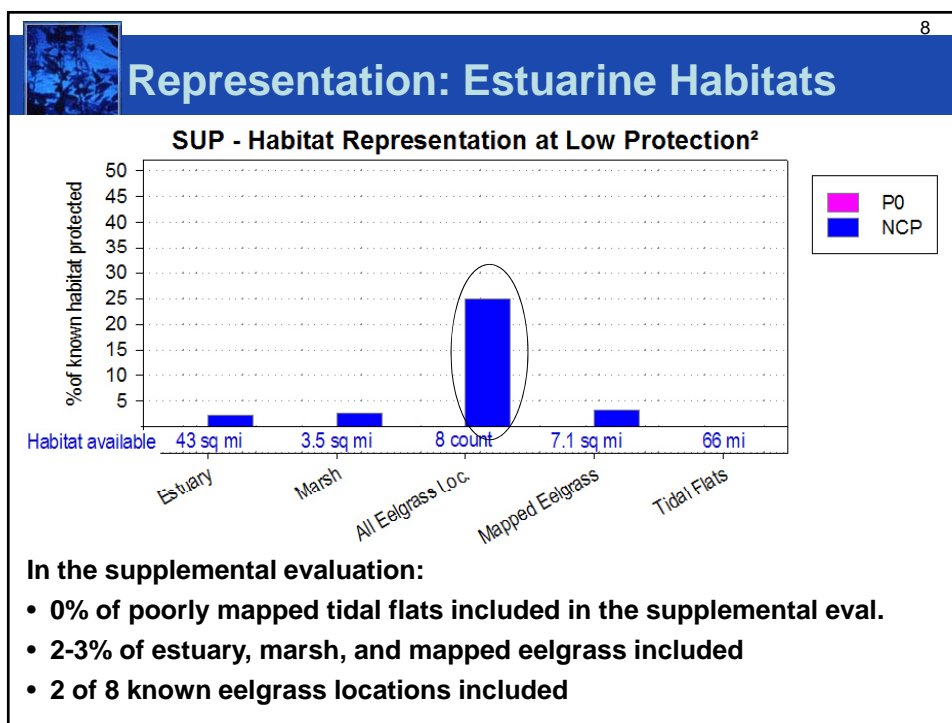
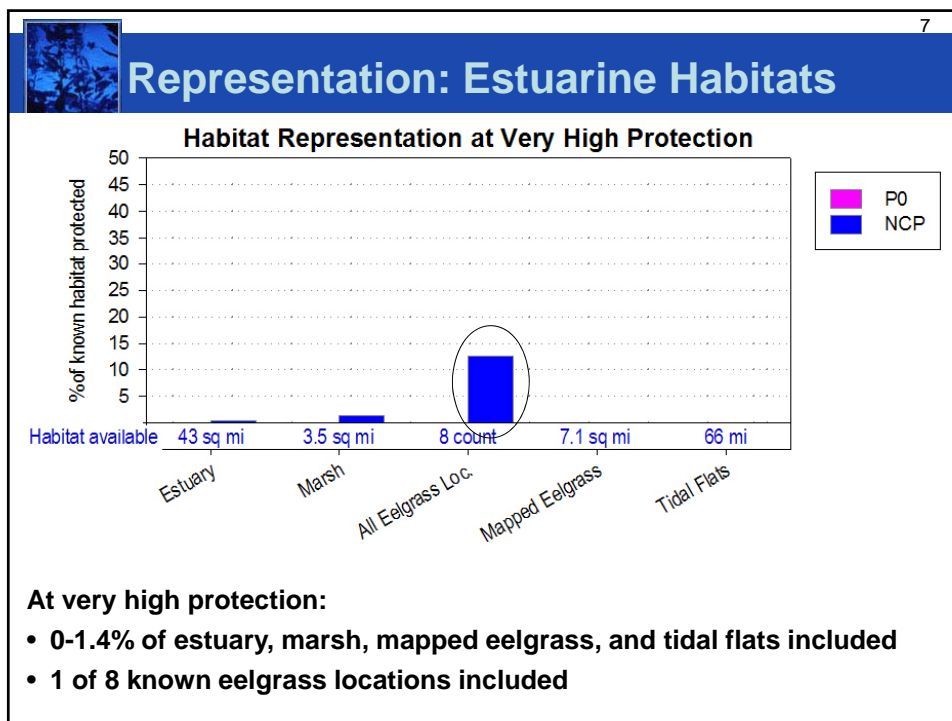
Representation: Soft Bottom Habitats



In the supplemental evaluation:

- 10-18% of available soft bottom habitats included
- ~29% of rare canyon habitat included

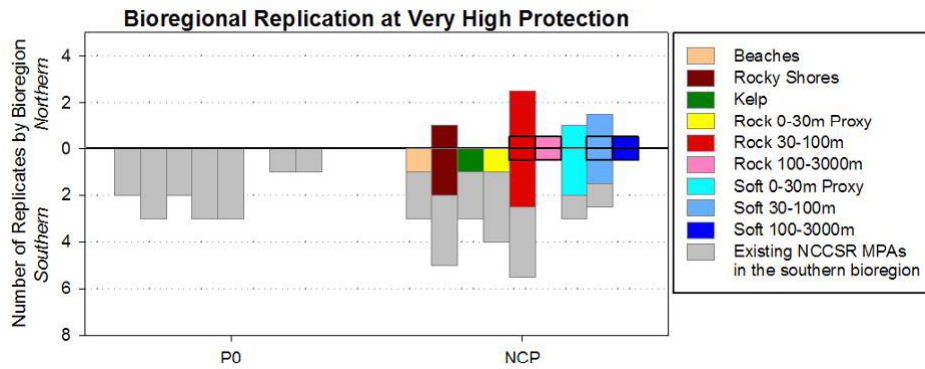
² Supplemental evaluations include MPAs at moderate-low and low LOP due to recreational take intended to accommodate only tribal uses, plus all MPAs at or above moderate-high protection.





Bioregional Replication

9



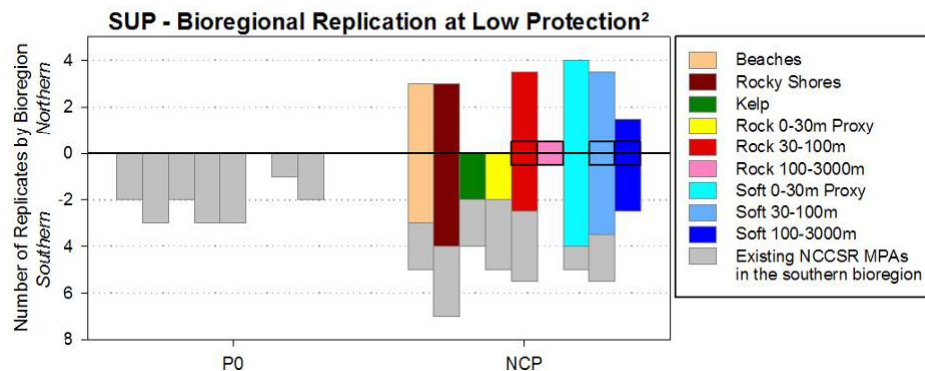
At very high protection:

- Three habitats: beaches, kelp, and 0-30m rock not replicated in northern bioregion
- Rare 100-3000m rock and soft bottom habitats replicated in only one MPA that falls on bioregional divide



Bioregional Replication

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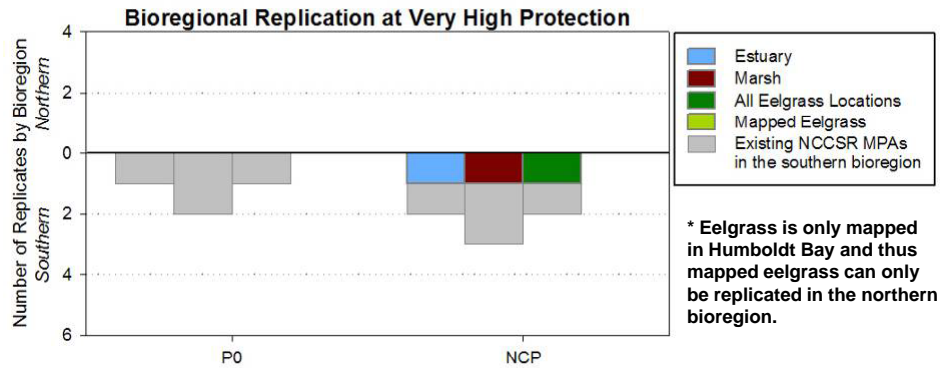
In the supplemental evaluation:

- Two habitats: kelp and 0-30m rock are not replicated in northern bioregion
- Rare 100-3000m rock is replicated only in one MPA that falls on bioregional divide

² Supplemental evaluations include MPAs at moderate-low and low LOP due to recreational take intended to accommodate only tribal uses, plus all MPAs at or above moderate-high protection.



Bioregional Replication

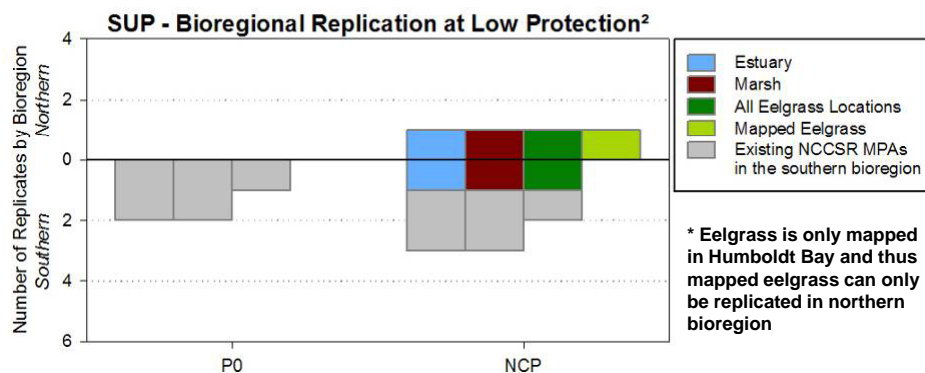


At very high protection:

- Ten Mile Estuary SMRMA includes replicates of estuary, marsh and eelgrass
- Estuarine habitats are not replicated in northern bioregion



Bioregional Replication



In the supplemental evaluation:

- South Humboldt Bay SMRMA adds a replicate of each estuarine habitat to northern bioregion at moderate-low protection
- Other estuarine MPAs are not included due to general recreational uses below mod-high protection

² Supplemental evaluations include MPAs at moderate-low and low LOP due to recreational take intended to accommodate only tribal uses, plus all MPAs at or above moderate-high protection



Summary of Habitat Evaluations

Guidelines Achieved



At or above mod-high protection:

- All key habitats, except tidal flats, are represented to some extent (1-36% of available)
- All key habitats meet replication guidelines at biogeographic scale (3-5 replicates), and at least one replicate of each is included in the MLPA North Coast Study Region (NCSR)
- Six of 12 key habitats have at least one replicate in both northern and southern bioregions: rocky shores, rock 30-100m, rock 100-3000m, soft 0-30m, soft 30-100m, soft 100-3000m



Summary of Habitat Evaluations

Guidelines Achieved (continued...)



Supplemental evaluation²:

- All key habitats, except tidal flats, are represented to some extent (2-38% of available)
- All key habitats meet replication guidelines at biogeographic scale (3-5 replicates), and at least one replicate of each is included in the NCSR
- 10 of 12 key habitats have at least one replicate in both northern and southern bioregions: beaches, rocky shores, rock 30-100m, rock 100-300m, soft 0-30m, soft 30-100m, soft 100-3000m, estuary, marsh and eelgrass

² Supplemental evaluations include MPAs at moderate-low and low LOP due to recreational take intended to accommodate only tribal uses, plus all MPAs at or above moderate-high protection



Summary of Habitat Evaluations

Guidelines Not Achieved



At or above mod-high protection:

- Tidal flats are not represented within the NCSR (poorly mapped)
- Beaches, kelp, and rock 0-30m are not replicated in the northern bioregion of the NCSR
- Estuarine habitats (estuary, marsh, and eelgrass) are not replicated in the northern bioregion of the NCSR



Supplemental evaluation²:

- Tidal flats are not represented within the NCSR (poorly mapped)
- Kelp and rock 0-30m are not replicated in the northern bioregion of the NCSR

² Supplemental evaluations include MPAs at moderate-low and low LOP due to recreational take intended to accommodate only tribal uses, plus all MPAs at or above moderate-high protection.



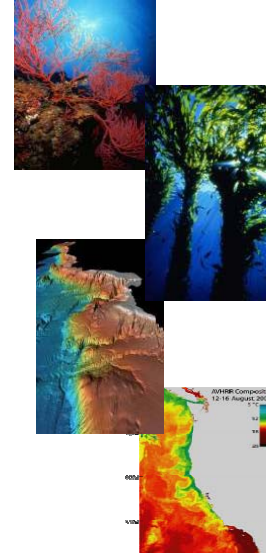
Background Information

The following slides include background information that will not be presented.



MLPA Goals*: Habitats

1. To protect the natural diversity and function of **marine ecosystems**.
2. To help sustain and restore **marine life populations**.
3. To improve **recreational, educational, and study opportunities** in areas with minimal human disturbance.
4. To protect representative and unique **marine life habitats**.
5. Clear objectives, effective management, adequate enforcement, sound science.
6. To ensure that MPAs are designed and managed as a **network**.

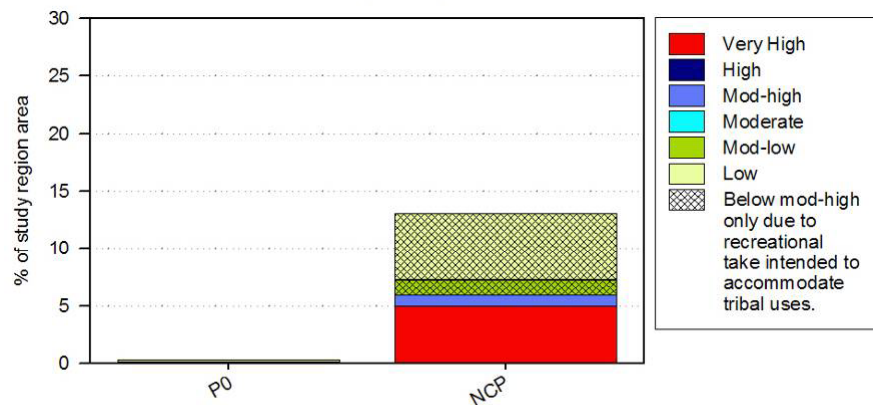


* Note that this language represents a summary of the MLPA goals



MPA Areas by Level of Protection

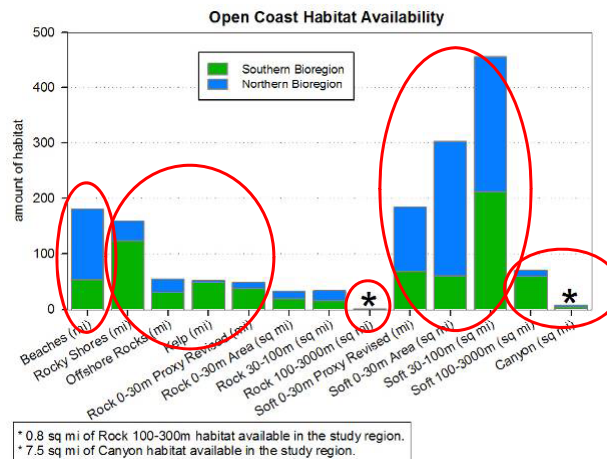
Comparison of Existing MPAs (Proposal 0) and the Round 3 NCRSG MPA Proposal by Level of Protection





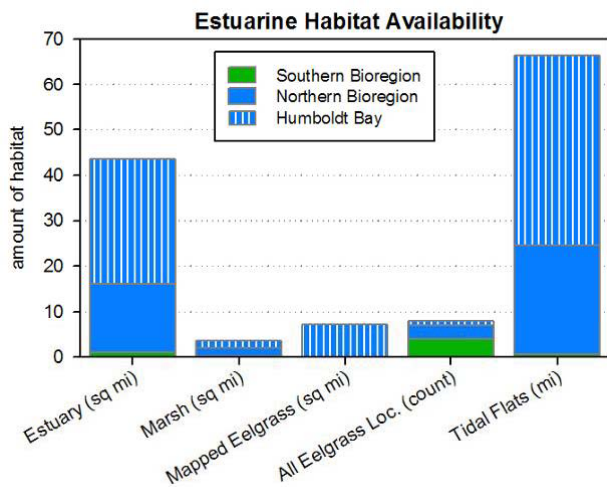
Habitat Availability

- Nearshore rocky habitats and kelp are less abundant in northern bioregion
- >100 meter depth habitats are relatively rare across the region, occurring mostly in canyons and southern bioregion
- Soft-bottom habitats are especially abundant in northern bioregion



Habitat Availability

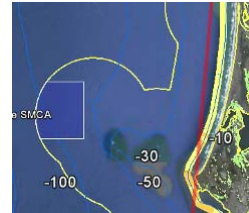
- Northern bioregion contains majority of estuarine habitats:
98% of estuarine area
96% of marsh area
99% of tidal flats
- Humboldt Bay contains 62% of all estuarine area and 100% of mapped eelgrass in MLPA North Coast Study Region (NCSR)
- Eelgrass is known to exist in 8 estuaries, 4 in the northern and 4 in the southern bioregions





Representation: Mod-high Protection

- **Only one moderate-high protection MPA** in study region: Point St. George Reef SMCA
- Contributes slightly to representation of several habitats:
 - Adds ~1% rock 30-100 meter (m)
 - Adds ~1.5% soft 30-100m
 - Adds ~2.5% soft 100-3000m
 - Does not contribute to representation of shoreline, nearshore, or estuarine habitats
- Graphs at moderate-high protection are included in evaluation document



Replication: Mod-high Protection

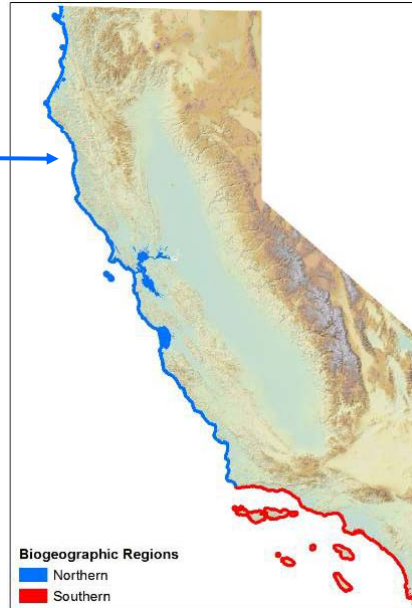
- **Only one moderate-high protection MPA** in the study region: Point Saint George Reef SMCA
- Contributes 1 replicate of several habitats:
 - rock 30-100m
 - soft 30-100m
 - soft 100-3000m
 - Does not contribute to replication of shoreline, nearshore, or estuarine habitats
- Graphs at moderate-high protection are included in the evaluation document





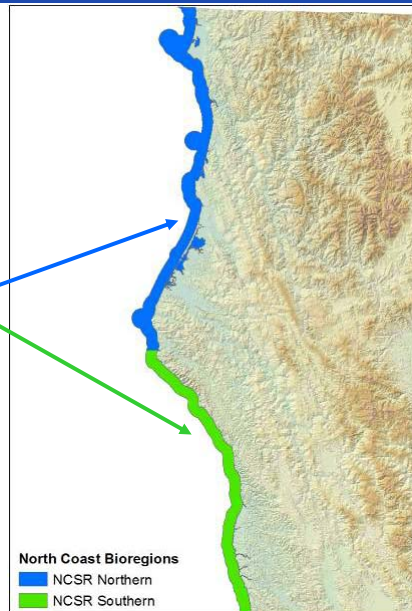
Replication Guidelines

- Replication guidelines in the *California Marine Life Protection Act Master Plan for Marine Protected Areas* call for **3-5 replicates within the MLPA biogeographic region**



Replication Guidelines

- Replication guidelines in the *Master Plan* call for 3-5 replicates within the MLPA **biogeographic region**
- The SAT additionally recommends **at least 1 replicate of each habitat per bioregion**
- Two **bioregions** in the north coast study region



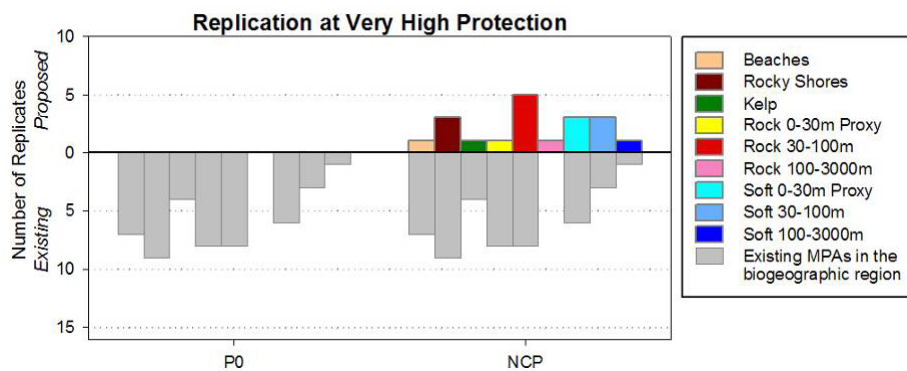


Replication Guidelines

- Replication guidelines in the *Master Plan* call for 3-5 replicates within the **biogeographic region**
- The SAT additionally recommends at least 1 replicate of each habitat per **bioregion**
- Two **bioregions** in the north coast study region
- No strong biological break at Point Arena, thus the southern bioregion of the NCSR extends into the northern half of the MLPA North Central Coast Study Region



Replication: Open Coast Habitats

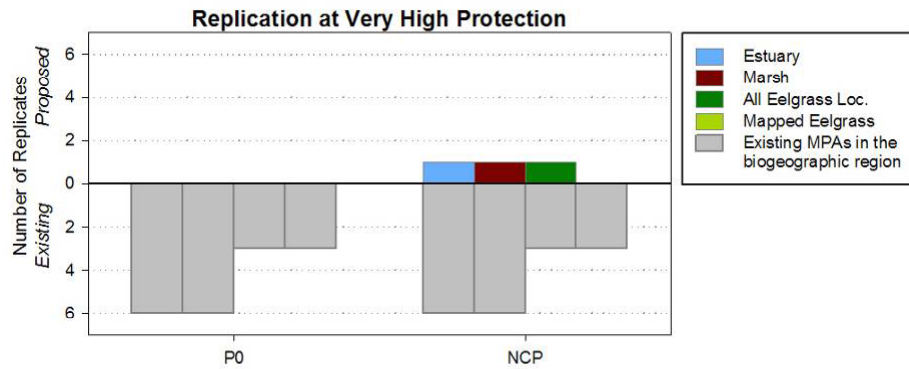


At very high protection:

- For most habitats, 3-5 replicates already exist elsewhere in biogeographic region (north central and central coast study regions).
- At least one replicate of each open coast habitat included in the NCSR



Replication: Estuarine Habitats



At very high protection:

- Ten Mile Estuary SMRMA includes replicates of estuary, marsh, and eelgrass at very high protection; eelgrass is known to occur but not mapped in Ten Mile Estuary